

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/25505

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : A47F 5/00

US CL : Please See Extra Sheet.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : Please See Extra Sheet.

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	US 3,489,383 A (ANSON) 13 January 1970, see entire document.	1 and 2
A	US 3,131,900 A (ANDERSON et al) 05 May 1964, see entire document.	1-35
A	US 5,664,750 A (COHEN) 09 September 1997, see entire document.	1-35
A	US 3,424,419 A (SIEGEL) 28 January 1969, see entire document.	1-35
X	US 5,642,819 A (RONIA) 01 July 1997, see entire document.	1 and 2

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents	*T*	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance		
E earlier document published on or after the international filing date	*X*	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*Y*	document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
O document referring to an oral disclosure, use, exhibition or other means	*Z*	document member of the same patent family
P document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

Date of mailing of the international search report

20 DECEMBER 1999

04 FEB 2000

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231
Facsimile No. (703) 305-3230Authorized officer
KIMBERLY T. WOOD *Diane Smith Jr*
Telephone No. (703) 308-2168

INTERNATIONAL SEARCH REPORT

international application No
PCT/US99.25505

A. CLASSIFICATION OF SUBJECT MATTER:
US CL :

248/314, 231.7, 229.25, 226.11, 229.15, 220.41, 220.43, 224.7, 229.1, 227.3, 228.6, 230.6, 231.71, 313, 316.1

B. FIELDS SEARCHED

'minimum documentation searched
Classification System: U.S.

248/314, 231.7, 229.25, 226.11, 229.15, 220.41, 220.43, 224.7, 229.1, 227.3, 228.6, 230.6, 231.71, 313, 316.1